

REMARKS

Claims 1-24 were originally filed in this application. In an election requirement, applicants choose to elect claims 1-17 and traversed the election. The applicants now affirm the election, without traverse. Thus, claims 18-24 are canceled herein without prejudice.

In the outstanding office action, claims 1-3 and 5-7 were rejected as being anticipated by U.S. Patent No. 6,279,290 ("Richardson"), claims 4, 9, 12-13, and 17 were rejected as being obvious in view of Richardson, claim 8 was rejected as being obvious over Richardson in view of U.S. Patent No. 6,085,469 ("Wolfe"), and claims 10-11 were rejected as being obvious over Richardson in view of U.S. Patent No. 6,250,022 ("Paz"). By way of this amendment, claims 1, 9, 14, and 16 are amended, claims 5, and 18-24 are canceled, and claims 25-27 are added. Accordingly, claims 1-4, 6-17, and claims 25-27 are pending and at issue.

With regard to the anticipation rejection, applicants respectfully submit that Richardson fails to disclose each and every element of the claims and, therefore, fails to anticipate the rejected claims.¹

Claim 1, as well as the claims dependent therefrom, specifies, *inter alia*, an exposure surface perpendicularly bisecting the support web, wherein at least part of the exposure surface is the exterior of the roof structure, the exposure surface including flanges projecting outwardly in opposing lateral directions.

Richardson fails to disclose such elements. First, the exposure surface (22) examiner cites in Richardson is not and cannot be at least part of the exterior of the roof structure. More specifically, the surface (22) is located interior of the roof structure and engages with a flat top (28), wherein the flat top (28) snaps into a connector consisting partially of the surface (22). The flat top (28) then covers the majority of the roof structure, and the entire surface (22), making it impossible for the surface (22) to be any part of the exterior of the roof structure. Second, the surface (22) does not include flanges projecting outwardly in opposing lateral directions as claimed. More specifically, the surface (22) includes flanges projecting upwardly in non-opposing vertical directions, which is quite opposite of the

¹ "Anticipation under 35 U.S.C. § 102 requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention." *Rockwell International Corp. v. United States*, 47 USPQ2d 1027 (Fed. Cir. 1998).

claimed exposure surface. The applicants, therefore, respectfully submit that the anticipation rejection should be withdrawn.

Turning to the obviousness rejections² of claim 4, which was rejected as being obvious over Richardson, and claim 8, which was rejected as being obvious over Richardson in view of Wolfe, the rejections are moot. Neither reference discloses the above limitations of independent claim 1 and, therefore, Richardson or the combination of Wolfe and Richardson does not teach all of the limitation of claims 4 and 8.

Turning now to the obviousness rejection of claims 9, 12-13, and 17 as being obvious over Richardson, the examiner states that it would have been obvious for one of ordinary skill in the art at the time the invention was made to have the roof panel closely adjacent to the support web. The applicants respectfully disagree.

Claim 9, as well as the claims dependent therefrom, specifies, *inter alia*, a combination roof panel and roof structure wherein the roof panel is closely adjacent to a support web in the roof structure and wherein the roof structure includes a slight negative slope corresponding to a slope of the roof panel.

Richardson, in contrast, teaches a combination roof panel and roof structure wherein the roof panel is apart from a support web in the roof structure and wherein the roof structure part (220) includes a substantially negative slope that intersects a slope of the roof panel at an angle of approximately 45 degrees. Thus, Richardson does not have a "slight negative slope corresponding to a slope of the roof panel."

Furthermore, the combination roof panel and roof structure in Richardson cannot function in manner that would allow the roof panel to be closely adjacent to a support web in the roof structure, nor can the roof structure in Richardson be modified to include a slight negative slope corresponding to a slope of the roof panel. As seen in Fig. 9 of Richardson, if the roof structure were modified to include a slightly negative slope corresponding to a slope of the roof panel (214), then the roof panels (214) would be prevented from being closely adjacent to the support web (228) by the clip portion located on the top of the support web (228). The clip portion would be positioned between the roof panels, thereby placing the

² "To establish a *prima facie* case of obviousness, ... there must be some suggestion or motivation ... to modify the references or to combine reference teachings ... [, and] the prior art reference (or references when combined) must teach or suggest 'all' the claimed limitations. (Internal quotations added). See MPEP § 2142.

clip portion, not the web support, adjacent to the roof panels (214). Thus, Richardson fails to disclose or suggest at least these limitations of claim 9.

Richardson provides no evidence that the roof panel could be closely adjacent to the support web. Furthermore, evidence of the non-obviousness of claim 9 is bolstered by the submission that the proposed modification teaches away from Richardson, thereby changing the principle operation of Richardson.³ Modifying Richardson to be constructed as claimed would require complete removal of the clip portion and reorientation of the structure (220). This would contradict specific teachings in Richardson. In light of all the foregoing, the applicants respectfully submit the obviousness rejection of claim 9 should therefore be withdrawn.

In the obviousness rejection of claims 10-11, which were rejected as being obvious over Richardson in view of Paz, the examiner states that Paz teaches a roof panel (Fig., 8b, 38) having a drip edge (206) extending longitudinally along the interior surface of the roof panel. The applicants respectfully disagree. Before addressing the rejection, applicants point out that the obviousness rejection is actually moot due to amendments made to claim 9, from which claims 10-11 depend. However, in an effort to avoid rejection of any added claim in view of this reference, applicants would like to preemptively address this issue.

Claim 10, as well as the claims dependent therefrom, specifies, *inter alia*, the roof panel includes a drip edge extending longitudinally along the interior surface of the roof panel.

The cited art provides no motivation to combine Richardson and Paz,⁴ nor does Paz disclose a drip edge. The structure (206) examiner points out in Fig. 8b is not a drip edge as required by the claim, but is rather a strut for lending structural support to a roof element (38) as defined in column 13, lines 45-49 of the specification. Furthermore, the strut (206) is not and could not be a drip edge as required by the present application. More specifically, the

³ If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. MPEP 2143.01, citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

⁴ "To establish obviousness based on a combination of elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference." *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000).

strut (206) is located underneath an integral roof, wherein the roof includes a contiguous downwardly extending wall located around the exterior of the integral roof. As seen in Fig. 8b, the strut (206) is located toward the center of the integral roof, and is recessed within it. Therefore, even in the worst of weather, the strut (206) would never be able to function as a drip edge, because the strut (206) does not come into contact with rain droplets.

In light of all the foregoing, the applicants respectfully submit the obviousness rejection of claim 10 should be withdrawn.

Lastly, examiner noted that claims 14-16 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Applicants have amended claims 14 and 16 as such, thereby placing claims 14-16 in condition for allowance. The appropriate fee for the additional independent claims is submitted herewith.

In accordance with the provisions of 37 C.F.R. 1.21, attached to this amendment is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

In light of the foregoing, the prompt issuance of a notice of allowance is respectfully solicited. Should the examiner have any questions, he is respectfully invited to telephone the undersigned.

Respectfully submitted,

MARSHALL, GERSTEIN, & BORUN
6300 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606-6402
(312) 474-6300

March 24, 2003

By:

Matthias Abrell
Matthias Abrell
Reg. No. 47,377

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) An roof structure comprising:
 a vertical support web;
an exposure surface perpendicularly bisecting the support web, wherein at least part of the exposure surface is the exterior of the roof structure, the exposure surface including flanges projecting outwardly in opposing lateral directions; and
a collector perpendicularly bisecting the support web opposite the exposure surface, wherein the collector has flanges projecting outward in opposing lateral directions, each flange having a distal edge upwardly extending from the flange.

9. (Amended) A roof panel and roof structure combination comprising:
at least one roof panel including [; an exterior surface [; and an interior surface; and a roof structure including [; an exposure surface[; having a slight negative slope corresponding to a slope of the at least one roof panel, a collector including opposing lateral distal edges that upwardly extend from the collector, [; and] a support web integral with and perpendicularly bisecting the exposure surface and the collector, wherein the exposure surface is opposite the collector, [; and wherein the roof panel is closely adjacent to the support web, and the distal edges of the collector supports the roof panel.

14. (Amended) [The combination of claim 13] A roof panel and roof structure combination comprising:
at least one roof panel including an exterior surface and an interior surface, wherein the exterior surface of the roof panel includes an arcuate projection [and] ; and a roof structure including an exposure surface having flanges projecting outward in opposing lateral directions, wherein at least one flange of the exposure surface of the roof structure [support] includes an arcuate channel, the arcuate channel being configured to interface with the arcuate projection of the roof panel,
a collector including opposing lateral distal edges that upwardly extend from the collector, and a support web integral with and perpendicularly bisecting the exposure surface and the collector, wherein the exposure surface is opposite the collector, and wherein the roof panel is closely adjacent to the support web, and the distal edges of the collector supports the roof panel.

16. (Amended) [The combination of claim 9, wherein the] A roof panel and roof structure combination comprising:

at least one roof panel including an exterior surface and an interior surface; and
a roof structure ha[s]ving a modulus of elasticity of at least about 2,500,000 pounds
per square inch including an exposure surface, a collector including opposing lateral distal
edges that upwardly extend from the collector, a support web integral with and
perpendicularly bisecting the exposure surface and the collector, wherein the exposure
surface is opposite the collector, and wherein the roof panel is closely adjacent to the support
web, and the distal edges of the collector supports the roof panel.